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**A study to assess the knowledge of menstrual hygiene among  
girls of first year nursing students in selected colleges at  
Moradabad**

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**Abstract**

**Background:** Menstruation is a normal physiological process of females at their reproductive age. However, it is surrounded with social taboos and supernatural beliefs. The poor knowledge and understanding of menstruation may lead to unsafe hygienic practice that intern increases the risk of reproductive and genitourinary tract infections, cervical cancer, school drop-out, poor academic performance and overall poor quality of life. Despite such clinical and academic effects, the knowledge and hygienic practice of adolescent girls towards menstruation is not well addressed in Indian rural areas, particularly among school adolescent girls. Therefore, the main objective of this study was to assess the knowledge of menstrual hygiene among girls of first year nursing students.

**Aim and Objective:** The aim of the study was to assess the knowledge of menstrual hygiene among girls of first year nursing students.

**Materials and Methods:** Quantitative research approach with purposive sampling technique was followed to include 87 participants. Demographic information and



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Knowledge structured questionnaire were used to gather data to assess the knowledge on menstrual hygiene. The content validity of the tool was recognized by 4 experts.

**Results:** The result of the study revealed most of the students belongs to rural area 44 (51%) and had average knowledge 70 (80.3%) on menstrual hygiene. There is no association between the level of knowledge regarding menstrual hygiene among students with their age, type of family, marital status, type of diet, nearby health service and no. of siblings and here is a significant association between the level of knowledge regarding menstrual hygiene among students with their religion, Family Income, and type of residence.

**Conclusion:** As observed in this study majority of girls had average knowledge and belongs to rural area, so it is concluded that they need education on maintain proper menstrual hygiene which prevent them from risk of genitourinary tract infections.

**Key words:** Knowledge, First year nursing girls, Menstruation, Menstrual Hygiene

## **INTRODUCTION**

Menstruation is a universal and normal phenomenon experienced by females during their reproductive age. The onset of menses typically occurs during adolescence, which is a critical period marked by significant physiological and emotional changes.

During adolescence, girls experience the menarche, which is the first occurrence of menstruation. This can be a confusing and challenging time for many young girls as they navigate through new physical changes and emotions. Proper education and support during this period are crucial to help them understand and manage their menstrual cycles effectively.

Menstrual hygiene among adolescents is a crucial aspect of their overall health and well-being. Proper menstrual hygiene management is essential to ensure that young girls can go through their menstrual cycles comfortably and confidently, without any adverse effects on their physical and emotional health.

## **MATERIALS AND METHODS**

Quantitative research approach with purposive sampling technique was followed to include 87 participants. Demographic information and Knowledge structured questionnaire were used to gather data to assess the knowledge on menstrual hygiene.



Data was collected from first year GNM girls at Teerthanker Mahaveer College of Nursing, Moradabad. Frequency and percentage analysis were used to describe the demographic characteristics of student nurses. Mean, median, mode, mean score percentage and the standard deviation was used to assess the level of knowledge regarding menstrual hygiene. Reliability of tool was calculated by administering split half method. The content validity of the tool was recognized by 4 experts.

### **INCLUSION CRITERIA**

GNM girl's students

Who are willing to participate in the study.

Who are available during data collection.

### **EXCLUSION CRITERIA**

Student who was absent.

### **RESULTS**

#### **Table 1: Frequency and percentage distribution of selected demographic variables. N = 87**

Illustrates the distribution of socio demographic data as per age, 78 (89.65%) were in the age group of 17-21 years were the majority. As per religion most of girls belongs to the Hindu religion 59 (67.80%). Most of the girls belongs to rural area 44 (50.60%). Majority of girls belongs to nuclear family 41 (47.12%). As per marital status majority of girls were single 82 (94.25%). Most of girl used to have vegetarian diet 49 (56.30%). Most of girls were had health services < 5 kms 41 (47%) from their home. Many of girls had 3 siblings 31 (36%). Majority of girl's family income were < 10000.

#### **Table 2: Assessment of knowledge of subjects regarding menstrual hygiene**

Table shows that in overall knowledge, range varies between 6-20, the mean score was 14.48, the Standard deviation was 3.27, and the median is 14 and the mode was 13.

#### **Table 3: Frequency and percentage distribution of subjects according to level of knowledge. N = 87**

Illustrates the distribution of socio demographic subjects according to level of knowledge, Majority of girls had average knowledge 70 (80.30%) on menstrual hygiene.

#### **Table 4: Chi-square value showing association between knowledge score and demographic variables.**



Table result revealed that there is no association between demographic and knowledge score.

## **DISCUSSION**

### **Demographic characteristics of samples**

Findings of the present study shows that 78 (89.65%) were in the age group of 17-21 years were the majority. As per religion most of girls belongs to the Hindu religion 59 (67.80%). Most of the girls belongs to rural area 44 (50.60%). Majority of girls belongs to nuclear family 41 (47.12%). As per marital status majority of girls were single 82 (94.25%). Most of girl used to have vegetarian diet 49 (56.30%). Most of girls were had health services < 5 kms 41 (47%) from their home. Many of girls had 3 siblings 31 (36%). Majority of girl's family income were < 10000.

Similar study was done by Sharma N, Sharma P, Sharma N, Wavare RR, Gautam B, Sharma M. 2013; Most of the girls (n=89, 50.56%) were in the age group of 18 -20 years followed by 60 girls (34.65%) in 21- 23 years age group. Although most of them were having well educated family background.<sup>1</sup>

### **The level of knowledge of students regarding menstrual hygiene**

Findings of present study showed that most of the girls have average knowledge regarding Menstrual Hygiene which were consistent with the findings of Belayneh, Z., Mekuriaw, B. who revealed that 60.3% of girls found to have poor menstrual hygiene practice.<sup>2</sup>

### **Association between knowledge score and demographic variables**

The findings of the present study regarding association between knowledge score and demographic variables showed that there is no association between demographic and knowledge score.

Similar study was done by V Vandana, K Simarjeet and K Amandeep (2016); Chi square value showing association of level of knowledge scores of adolescent schools going girls with selected demographic variables. The findings suggested that the computed chi square values of age (9.62), class (12.39), religion (2.03), education of mother (12.29), occupation of mother (7.45), type of family (4.30), place of residence (1.11), dietary pattern (7.11), birth order (7.78), family income per month (11.06) were found to be statistically non-significant.



**Table 1: Frequency and percentage distribution of selected demographic variables.**

N = 87

Sl. No.	Socio-demographic characteristics	Frequency(f)	Percentage (%)
1.	<b>Age (in years)</b>		
	17-21	78	<b>89.65</b>
	22-25	07	08.06
	26-30	02	02.29
2.	<b>Religion</b>		
	Hindu	59	<b>67.80</b>
	Muslim	19	21.80
	Christian	03	3.50
	Other	06	6.90
3.	<b>Area of residence</b>		
	Rural	44	<b>50.60</b>
	Semi - Urban	08	9.20
	Urban	35	40.20
4.	<b>Type of family</b>		
	Nuclear	41	<b>47.12</b>
	Joint	30	34.48
	Extended	01	01.15
	Separated	15	17.25
5.	<b>Marital Status</b>		
	Single	82	<b>94.25</b>
	Married	05	05.74
	Widow	00	00
	Divorced	00	00
6.	<b>Type of diet</b>		
	Veg	49	<b>56.30</b>
	Non - veg	38	43.70
7.	<b>Health services distance (Km)</b>		
	< 5	41	<b>47</b>
	05-10	25	29
	11-14	04	05
	>14	17	19
8.	<b>Siblings</b>		
	01	08	09
	02	23	26
	03	31	<b>36</b>



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	>03	25	29
9.	<b>Family income (Monthly)</b>		
	<10000	31	<b>35.60</b>
	10000 - 15000	25	28.70
	15001 – 20000	08	09.20
	>20000	23	26.40

**Table 2: Assessment of knowledge of subjects regarding menstrual hygiene.**

Variable	No. of items	Range		Knowledge Score			
		Min.	Max.	Mean	SD	Median	Mode
Knowledge	25	06	20	14.48	03.27	14	13

**Table 3: Frequency and percentage distribution of subjects according to level of knowledge.**

N = 87

Sl. No.	Level of knowledge	Frequency (f)	Percentage (%)
1.	Good	08	09.10
2.	Average	70	80.30
3.	Poor	09	10.20
<b>Total</b>		<b>87</b>	<b>100</b>

**Table 4: Chi-square value showing association between knowledge score and demographic variables**

N = 87

Sl. No.	Demographic variables	Median knowledge score (14)		$\chi^2$ calculated values	df	Inference
		< Median	≥ Median			
1.	<b>Age (in years)</b>			19.81	2	NS
	17-21	28	50			
	22-25	03	04			
	26-30	01	01			
2.	<b>Religion</b>			52.13	3	NS
	Hindu	21	38			



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	Muslim	07	12			
	Christian	02	01			
	Other	02	4			
<b>3.</b>	<b>Area of residence</b>					
	Rural	19	25	34.70	2	NS
	Semi - Urban	03	05			
Urban	10	25				
<b>4.</b>	<b>Type of family</b>					
	Nuclear	15	26	57.82	3	NS
	Joint	11	19			
	Extended	00	01			
Separated	06	09				
<b>5.</b>	<b>Marital Status</b>					
	Single	29	53	7.92	3	NS
	Married	03	02			
	Widow	00	00			
Divorced	00	00				
<b>6.</b>	<b>Type of diet</b>					
	Veg	16	23	16.54	1	NS
Non – veg	16	22				
<b>7.</b>	<b>Health services distance (Km)</b>					
	< 5	18	23	46.57	3	NS
	05-10	12	13			
	11-14	01	03			
>14	01	16				
<b>8.</b>	<b>Siblings</b>					
	01	01	07	15.15	3	NS
	02	10	13			
	03	14	17			
>03	07	18				
<b>9.</b>	<b>Family income (Monthly)</b>					
	<10000			32.49	3	NS
	10000 - 15000	10	21			
	15001 – 20000	11	14			
>20000	03	05				
		08	15			

**Note: NS: Nothing significant (p>0.05), S\*: Significant (0.05), df: Degree of freedom.**

### Limitations



This study is limited to the assessment of knowledge regarding menstrual hygiene among girls of first year nursing students in selected colleges at Moradabad.

### **RECOMMENDATIONS**

**Considering, below are some personal experiences of the investigator that offered following recommendations.**

1. A study can be conducted by including the additional socio-demographic variables.
2. A similar study can be conducted by using educational methods like planned teaching program, demonstration, self-instructional module, information booklet, etc.
3. A similar study can be replicated on a large sample to generalize the findings.
4. To identify and implement new strategies devices to improve in menstrual hygiene.

### **CONCLUSION**

As per the study findings, the knowledge of the students regarding menstrual hygiene was average 70 (80.3%). The knowledge of the students was not influenced by their age, religion, type of family, marital status, types of residence, type of diet, nearby health service centre, no. of siblings and monthly income.

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